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By: Nancy Ramos Printed: Nancy Ramos

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Kaser et al.

Title: POLYCYCLIC AROMATIC HYDROCARBON INDUCED MOLECULES

Serial No.: To Be Assigned

Filing Date: Herewith

Examiner: To Be Assigned

Group Art Unit: To Be Assigned

Official Draftsman

Commissioner for Patents

Washington, D.C. 20231

SUBMISSION OF FORMAL DRAWINGS

Sir:

Transmitted herewith are Figure(s) 1A, 1B, 1C, 1D, 1E, 1F, 2A, 2B, 2C, 3, 4, as Eleven (11) sheets of formal drawings for this application. Each sheet of drawing indicates the identifying indicia suggested in 37 CFR Section 1.84(c) on the reverse side of the drawings.

Applicants believe that no fee is due with this paper. However, if the Commissioner determines that a fee is necessary, the Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. **09-0108. A duplicate copy of this communication is enclosed.**

If there are any questions regarding the above, the Examiner is invited to call the undersigned at 650-855-0555.

Respectfully submitted,

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Date: 18th April 2001

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FOOTNOTES

ADP 101
SUBCLASS
DRAFT 13

| | | | | | | |
|-----|--|-----|-----|-----|-----|-----|
| 11 | 5' CTTCA GTT CCT CGA AGA GAT TCA CTT TCA AAA ACA TCA ACT CCT TAT AAC AAA TCA | 20 | 29 | 38 | 47 | 56 |
| 65 | AAC AAA GCA GCA AGC CAA CAA GGG ACC CCA TGG GAA ACA CTT GTC GTG TTT GCT | 74 | 83 | 92 | 101 | 110 |
| 119 | ATC AAC TTG AAG CAA TTA AAC GTT CAA ATG AAT ATG AGT AAT GTA ATG GGA AAT | 128 | 137 | 146 | 155 | 164 |
| 173 | ACA ACT TGG ACA ACT AGT GGT TTG AAG AGC CAG GGC CGT CTG TCA GTA GGA AGT | 182 | 191 | 200 | 209 | 218 |
| 227 | AAT CGT GAT CGA GAG ATC AGC ATG TCT GTT GGT CTG GGA AGA TCA CAA TTA GAT | 236 | 245 | 254 | 263 | 272 |
| 281 | TCT AAA GGA GGA GTA GTT GGA GGG ACC ATA GAT GTC AAT GCT TTG GAG ATG GTT | 290 | 299 | 308 | 317 | 326 |
| 335 | GCT CAT ATT TCT GAA CAT CCA AAT CAG CAA CCC AGT CAC AAA ATT CAG ATT ACT | 344 | 353 | 362 | 371 | 380 |
| 389 | ATG GGT TCT ACT GAA GCT CGT GTT GAT TAC ATG GGC TCA AGT ATC CTC ATG GGC | 398 | 407 | 416 | 425 | 434 |

FIGURE 1A

TEST 40-4408E860

| | |
|----------|----------|
| APPROVAL | FIG. |
| DRAFT | SUBCLASS |

| | | | | | | | | | |
|-----|-------------------------------------|-----|-------------------------|-----|-------------------------|-----|-----------------------------|-----|-----|
| 443 | ATC TTC AGT AAT GCT GAT | 452 | CTT AAG CTT CAG GAT GAA | 461 | CTT AAG CTT CAG GAT GAA | 470 | TGG AAA GTA AAC TTG TAT | 488 | TAT |
| | I F S N A D L K L Q D E W K V N L Y | | | | | | | | |
| 497 | AAT ACA TTG GAT TCA AGC ATA | 506 | ACT GAT AAA AGT GAG | 515 | ACT GAT AAA AGT GAG | 524 | ATT TTC GTC CAT GGA GAT | 542 | GAT |
| | N T L D S S I T D K S E I F V H G D | | | | | | | | |
| 551 | TTG AAG TGG GAT ATT TTC | 560 | CAA GTA ATG ATA TCA | 569 | CAA GTA ATG ATA TCA | 578 | AGG TCA ACC ACA CCA GAT CTG | 596 | CTG |
| | L K W D I F Q V M I S R S T P D L | | | | | | | | |
| 605 | ATA AAA ATA GGA ATG AAG | 614 | CTC CAG GAA TTT TTC | 623 | CTC CAG GAA TTT TTC | 632 | ACA CAA CAA TTT GAT ACC AGC | 650 | AGC |
| | I K I G M K L Q E F F T Q Q F D T S | | | | | | | | |
| 659 | AAA CGA GCT CTG TCT ACC | 668 | TGG GGA CCA GTT CCT | 677 | TGG GGA CCA GTT CCT | 686 | TAC CTT CCG CCA AAG ACA ATG | 704 | ATG |
| | K R A L S T W G P V P Y L P P K T M | | | | | | | | |
| 713 | ACT AGC AAC CTA GAA AAA | 722 | AGT TCA CAA GAA CAA | 731 | AGT TCA CAA GAA CAA | 740 | TTA CTT GAT GCA GCA CAT | 758 | CAT |
| | T S N L E K S S Q E Q L L D A A H | | | | | | | | |
| 767 | CGA CAC TGG CCT GGA GTA | 776 | TTG AAG GTG GTA TCA | 785 | TTG AAG GTG GTA TCA | 794 | GGA TGC CAC ATA TCC TTA TTT | 812 | TTT |
| | R H W P G V L K V S G C H I S L F | | | | | | | | |
| 821 | CAG ATT CCA TTA CCA GAA | 830 | GAT GGA ATG CAA TTT | 839 | GAT GGA ATG CAA TTT | 848 | GGA TCA ATG AGC TTA CAT | 866 | CAT |
| | Q I P L P E D G M Q F G S M S L H | | | | | | | | |

FIGURE 1B

FOBT4D" 4408E850

| | |
|-----------|----------|
| ADVISORY | FIG. |
| DRAFTSMAN | SUBCLASS |

| | | |
|------|---|------|
| 875 | GGA AAT CAT ATG ACA CTG GCA TGT TTT CAT GGT CCA AAT TTT CGT TCA AAA TCT | 920 |
| | G N H M T L A C F H G P N F R S K S | |
| 929 | TGG GCC CTT TTT CAT TTA GAA GAA CCA AAT ATT GCT TTT TGG ACT GAA GCT CAG | 974 |
| | W A L F H L E E P N I A F W T E A Q | |
| 983 | AAA ATC TGG GAA GAT GGC TCC AGT GAT CAT TCT ACA TAT ATT GTA CAA ACA CTA | 1028 |
| | K I W E D G S S D H S T Y I V Q T L | |
| 1037 | GAT TTT CAC CTG GGT CAT AAT ACT ATG GTT ACC AAA CCA TGT GGT GCT TTG GAA | 1082 |
| | D F H L G H N T M V T K P C G A L E | |
| 1091 | AGT CCT ATG GCA ACA ATA ACC AAG ATA ACA AGG CGT CGC CAT GAA AAT CCA CCC | 1136 |
| | S P M A T I T K I T R R R H E N P P | |
| 1145 | CAT GGA GTA GCA AGT GTG AAA GAA TGG TTC AAT TAT GTT ACA GCT ACA AGG AAT | 1190 |
| | H G V A S V K E W F N Y V T A T R N | |
| 1199 | GAA GAG CTA AAT CTG CTT CGT AAT GTT GAT GCT AAC AAC ACT GAG AAT AGC ACT | 1244 |
| | E L N L L R R N V D A N N T E N S T | |
| 1253 | ACT GTG AAG AAT TCT AGT TTG TTG AGT GGA TTC AGA GGA GGT TCT AGC TAC AAC | 1298 |
| | T V K N S S L L S G F R G G S S Y N | |

FIGURE 1C

FOOTHO" 4403E360

| | |
|--------|----------|
| ADP | FIG. |
| DRAFTS | SUBCLASS |

| | | | | | |
|---|-------------------------|-------------|-------------|-------------|------|
| 1307 | 1316 | 1325 | 1334 | 1343 | 1352 |
| CAT GAA ACA GAG ACT ATC | TTT GCA TTA CCA AGG ATG | CAG CTT GAC | TTT AAA TCC | | |
| H E T E T I F A L P R M Q L D F K S | | | | | |
| 1361 | 1370 | 1379 | 1388 | 1397 | 1406 |
| ATT CAT GTT CAA GAA CCA CAG GAG CCT TCA TTA CAG | GAT GCC AGC | CTG AAG CCA | | | |
| I H V Q E P Q E P S L Q D A S L K P | | | | | |
| 1415 | 1424 | 1433 | 1442 | 1451 | 1460 |
| AAA GTA GAA TGT AGT GTG | ACA GAG TTC ACT GAC | CAC ATT TGT | GTG ACT ATG | | |
| K V E C S V V T E F T D H I C V T M | | | | | |
| 1469 | 1478 | 1487 | 1496 | 1505 | 1514 |
| GAT GCT GAG CTC ATC ATG | TTT CTT CAT | GAT TTA GTA | TCA GCT TAT | CTT AAA GAA | |
| D A E L I M F L H D L V S A Y L K E | | | | | |
| 1523 | 1532 | 1541 | 1550 | 1559 | 1568 |
| AAA GAA AAA GCC ATC TTT | CCA CCT CGG | ATT TTA TCT | ACT CGA CCA | GGA CAA AAA | |
| K E K A I F P P R I L S T R P G Q K | | | | | |
| 1577 | 1586 | 1595 | 1604 | 1613 | 1622 |
| AGT CCA ATT ATT ATA CAT | GAC GAC AAT | TCC TCT GAT | AAA GAT AGA | GAA GAT AGC | |
| S P I I I H D D N S S D K D R E D S | | | | | |
| 1631 | 1640 | 1649 | 1658 | 1667 | 1676 |
| ATC ACT TAT ACT ACT GTG | GAC TGG AGA | GAT TTT ATG | TGC AAT ACA | TGG CAC CTA | |
| I T Y T T V D W R D F M C N T W H L | | | | | |

FIGURE 1D

FOOTNOTES

1685 GAA CCT ACT CTT AGA TTA ATT TCT TGG ACT GGA AGA AAG ATT GAT CCA GTA GGT 1730
E P T L R L I S W T G R K I D P V G

1739 GTT GAT TAT ATT CTT CAA AAA TTG GGC TTT CAT CAT GCT AGG ACT ACT ATT CCT 1784
V D Y I L Q K L G F H H A R T T I P

1793 AAA TGG CTT CAA AGA GGA GTC ATG GAT CCA CTG GAC AAG GTT CTG TCA GTT CTT 1838
K W L Q R G V M D P L D K V L S V L

1847 ATC AAA AAG CTC GGT ACT GCA CTA CAG GAT GAA AAG GAA AAA GGC AAA GAC 1892
I K K L G T A L Q D E K E K K G K D

1901 AAA GAA GAA CAC TAA AAA AGT AAT TTG ATC TGT GAA CAA ATT ATG ATT GTG TCT 1946
K E E H

1955 GTT TTA TTA CAC TGG AGT GTT TTT TTA GTA TAA TAA TTT GAA ATA TAA CTT TAA 2000

2009 AAT AAT TCT AAA TTT GTG GCT ATA ATT AAA AGT TTG TAA GTT AAC CTG TTC TAG 2054
2018 2027 2036 1991

FIGURE 1E

FIG. 1F

| | |
|-----------|------|
| APPROVED | FIG. |
| SUBCLASS | |
| DRAFTSMAN | |

| | | | | | |
|---|------|------|------|------|------|
| 2063 | 2072 | 2081 | 2090 | 2099 | 2108 |
| TTC CAT CAT TCT GTG TAC AGT GAA GTA TTG CAT GAT AAT GTA AAT TTT GTG AAA | | | | | |
| 2117 | 2126 | 2135 | 2144 | 2153 | 2162 |
| AAC TAG ATT AAA ATA TAT AAC TGC TTG TTA TGG TTT ATA ATT ATA TAA TGT GCA | | | | | |
| 2171 | 2180 | 2189 | 2198 | 2207 | 2216 |
| ATA CAA TTC CTG CAT CTT TAA AAT GTC TGC AGA ATA ACT GTG AAT TTT TTT GTT | | | | | |
| 2225 | 2234 | 2243 | 2252 | 2261 | 2270 |
| ATT GGA TTG GCC GTA ACT TTT AGA AAA AAA TCT TGT TGA TGA TAA TGT GAT TTT | | | | | |
| 2279 | 2288 | 2297 | 2306 | 2315 | 2324 |
| GGG GAG GTC ATT AAT TGC TTT TTC TTT TTT AAA TGT AGA CTT ATA TAA ATA CCT | | | | | |
| 2333 | 2342 | 2351 | 2360 | 2369 | 2378 |
| GTT TGT ATA TAG CTT GAG TAA TTG TGA TAT GAT TGT ATA CCA CTA AAA TAT TGT | | | | | |
| 2387 | 2396 | 2405 | 2414 | 2423 | 2432 |
| TAA CTA TTA TAA TAA AGT CAC AGT AAT GGT TTA AAA AAG AAA AAA GAA AAA AAA | | | | | |

AAA AAA A 3'

FIGURE 1F

5' GCTTG AAG GCG GGA AAA TAC GGA ATG GAG CGA CAG GGA GTG GAC GTG CCC CAT GTG
11 20 29 38 47 56
M E R Q G V D V P H V

AAA TGC AAA GAC CAG GAA CCG CAG CCC TTG GGG GAG AGC AAG GAG CAT CCG CGG
65 74 83 92 101 110
K C K D Q E P Q P L G E S K E H P R

TGG GAA GAG AAC TGC GAG GAG GAA GCT GGT GGA GGG CCA GCT AGT GCC AGT TGC
119 128 137 146 155 164
W E E N C E E E A G G G P A S A S C

CAG CTG ACG GTC CTG GAA GGA GGG AAG TCG GGA CTC TAC TTC TCC TCT CTG GAC TCA
173 182 191 200 209 218
Q L T V L E G G K S G L Y F S S L D S

AGC ATT GAC ATC CTG CAG AAG AGA GCC CAG GAG CTG ATC GAA AAC ATC AAC AAG
227 236 245 254 263 272
S I D I L Q Q K R A Q E L I E N I N K

AGC CGG CAA AAG GAC CAT GCA CTC ATG ACC AAC TTC AGG AAC AGC CTG AAG ACC
281 290 299 308 317 326
S R Q K D H A L M T N F R N S L K T

FIGURE 2A

| | | | |
|---|---|-----|-----|
| 335 | AAG GTT TCG GAT CTG ACA GAG AAA TTA GAG GAG AGG ATC TAT CAG ATT TAT AAT | 371 | 380 |
| K V S D L T E K L E E R I Y Q I Y N | | | |
| 339 | GAC CAC AAC AAG ATC ATC CAG GAA AAG CTC CAA GAG TTC ACC CAG AAA ATG GCA | 425 | 434 |
| D H N K I I Q E K L L Q E E F T Q K M A | | | |
| 443 | AAG ATC AGC CAT TTG GAG ACA GAG CTC AAA CAA CAA GTC TGC CAC AGC GTG GAG ACT | 479 | 488 |
| K I S H L E T E L K Q Q V C H S V E T | | | |
| 497 | GTG TAC AAA GAC CTG TGT CTC CAG CCT GAG CAG AGC AGC CTA AGA CTC AGA TGG GGG | 533 | 542 |
| V Y K D L C L Q P E Q S L R L R W G | | | |
| 551 | CCA GAC CAC TCT AGG GGA AAG TCC CCA CCA CGT CCC GGC AAC TCA CAG CCC CCA | 587 | 596 |
| P D H S R G K S P P P R P G N S Q P P | | | |
| 605 | GAC GTG TTC GTT TCT TCT GTG GCT GAA ACT ACT ACT TCT TCT CAG GCC ACT GCT TCA GAA | 641 | 650 |
| D V F V S S V A E T T T S Q A T A S E | | | |

FIGURE 2B

TOBT40" 44088860

| | |
|----------|----------|
| APPENDIX | FIG. |
| DRAFT | SUBCLASS |

| | | | | | | |
|-----|---|-----|-----|-----|-----|-----|
| 659 | GTA CAG ACC AAC AGA GAT GGT GAA TGC TGA CAG CTG CCG GGA GAC TCA CGC CTT | 668 | 677 | 686 | 695 | 704 |
| V | Q T N R D G E C | | | | | |
| 713 | AGT GAC AGT CTC CAG GAG AAG ACT GTG AGG CCA CCA TTT GGG CCA CAC TGA GAA | 722 | 731 | 740 | 749 | 758 |
| | | | | | | |
| 767 | ATT GTT TTT CAT GGT TCT ATA ATG CAT CTT GGC AGA AAA CAA AAA CCC AAA | 776 | 785 | 794 | 803 | 812 |
| | | | | | | |
| 821 | GCT CCT TGT GCT GAA CTC CCA AAA TGT AGC AAG TCC AGC CCT CTC CAT AGG CCC | 830 | 839 | 848 | 857 | 866 |
| | | | | | | |
| 875 | AGG CTT CGT GCT CCC CAC CCT TGG CAA GTT CTC CCC ACC CCC AGC CCC ACA GTT | 884 | 893 | 902 | 911 | 920 |
| | | | | | | |
| 929 | TAT TAA ATG TTT GAT TTT CAA AAA 3' | 938 | | | | |
| | | | | | | |

FIGURE 2C

5' CTC AAG ACC CAG CAG TGG GAC AGC CAG ACA GAC GGC AGC ATG GCA CTG AGC TCC
 9 18 27 36 45 54
 M A L S S
 CAG ATC TGG GCC GCT TGC CTC CTC CTC CTC GGC AGC CTG ACC AGT
 63 72 81 90 99 108
 Q I W A A C L L L L A S L T S
 GGC TCT GTT TTC CCA CAA CAG ACG GGA CAA CTT GCA GAG CTG CAA CCC CAG GAC
 117 126 135 144 153 162
 G S V F P Q Q T G Q L A E L Q P Q D
 AGA GCT GGA GCC AGG GCC AGC TGG ATG CCC ATG TTC CAG AGG CGA AGG AGG CGA
 171 180 189 198 207 216
 R A G A R A S W M P M F Q R R R R R
 GAC ACC CAC TTC CCC ATC TGC ATT TTC TGC TGC GGC TGC TGT CAT CGA TCA AAG
 225 234 243 252 261 270
 D T H F P I C I F C C G C C H R S K
 TGT GGG ATG TGC TGC AAG ACG TAG AAC CTA CCT GCC CTG CCC TCC CCT CCC
 279 288 297 306 315 324
 C G M C C K T
 TTC CTT ATT TAT TCC TGC TGC CCC AGA ACA TAG GTC TTC GAA TAA AAT GGC TGG
 333 342 351 360 369 378
 TTC TTT TGT TTT CCA AAA AAA AA 3'
 387 396

FIGURE 3

FOETHO" H0BEEB60

| | |
|---------|----------|
| APPROV | FIG. |
| DRAFTSM | SUBCLASS |

| | | |
|----|---|-----------|
| 1 | M A L S S Q I W A A C L L L L L L A S L T S G S V F P Q Q | 1642580 |
| 1 | M A L S T R I Q A A C L L L L L L - A S L S S G A Y L R Q Q | 700139271 |
| 31 | T G Q L A E L Q P Q D R A G A R A S W M P F Q - R R R R R | 1642580 |
| 30 | T R Q T T A L Q P W H G A E S K T D D S A L L M L K R R K R | 700139271 |
| 60 | D T H F P I C I F C C G C C H R S K C G M C C K T | 1642580 |
| 60 | D T N F P I C L F C C K C C K N S S C G L C C I T | 700139271 |

FIGURE 4